## AMENDMENTS

**Listing of Claims:**

The following listing of claims replaces all previous listings or versions thereof:

1. (currently amended) A method for determining a dose of a UGT2B7-glucuronidated drug for a patient comprising:

a) determining the level of UGTB7 activity or expression in a patient by determining the nucleotide sequence at position -161 in one *UGT2B7* gene;

b) determining the dose of the drug based on the level of UGT2B7 activity or expression in the patient.

2. (currently amended) The method of claim 1, wherein ~~determining the level of UGT2B7 activity or expression comprises determining~~ the nucleotide sequence at position -161 in one *UGT2B7* gene of the patient is determined.

3.-4. (cancelled)

5. (original) The method of claim 2, further comprising:

c) classifying the UGT2B7 activity level in the patient, whereby identification of a thymidine residue indicates the patient does not have a low level of activity.

6. (original) The method of claim 1, further comprising administering the drug to the patient.

7. (original) The method of claim 2, wherein determining the nucleotide sequence at position -161 in the *UGT2B7* gene comprises amplifying a sequence comprising position -161.

8. (original) The method of claim 2, wherein determining the nucleotide sequence at position -161 in the *UGT2B7* gene comprises sequencing a portion of the *UGT2B7* promoter comprising position -161.

9. (original) The method of claim 8, wherein position -161 is sequenced from one UGT2B7 promoter.

10. (original) The method of claim 3, further comprising determining the nucleotide sequence at position -161 of a second *UGT2B7* gene in the patient, whereby 1) identification of a second thymidine residue indicates a high level of UGT2B7 activity; 2) identification of a second cytosine residue indicates a low level of UGT2B7 activity; and, 3) identification of a residue different than the residue in the first promoter indicates an intermediate level of UGT2B7 activity.

11. (original) The method of claim 2, wherein determining the nucleotide sequence at position -161 in one *UGT2B7* gene comprises determining the nucleotide sequence of a first polymorphism in complete linkage disequilibrium (LD) with position -161 of the *UGT2B7* gene.

12. (original) The method of claim 11, wherein the nucleotide sequence of a polymorphism in complete LD is position +801 or +802 of the *UGT2B7* gene.

13. (original) The method of claim 12, wherein the nucleotide sequence at position +801 of the *UGT2B7* gene is identified.

14. (original) The method of claim 12, wherein the nucleotide sequence at position +802 of the *UGT2B7* gene is identified.

15. (original) The method of claim 12, wherein the nucleotide sequence at position +801 or +802 is a cytosine.

16. (original) The method of claim 12, wherein the nucleotide sequence at position +801 or +802 is a thymidine.

17. (original) The method of claim 11, wherein determining the nucleotide sequence of position -161 in one *UGT2B7* gene further comprises determining the nucleotide sequence of a second polymorphism in complete linkage disequilibrium (LD) with the polymorphism at position -161 of the *UGT2B7* gene.

18. (original) The method of claim 17, wherein the second polymorphism in complete LD with the polymorphism at position -161 of the *UGT2B7* gene is the polymorphism at position +801 or +802 of the *UGT2B7* gene.

19. (withdrawn) The method of claim 1, wherein the drug has an aliphatic carboxylic acid function.

20. (withdrawn) The method of claim 19, wherein the drug is a propionic acid derivative, a phenylacetic acid derivative, a salicylic acid derivative, a acetic acid derivative, or an isobutyric acid derivative .

21. (withdrawn) The method of claim 20, wherein the drug is a propionic acid derivative.

22. (withdrawn) The method of claim 21, wherein the proprionic acid derivative is benoxaprofen, fenoprofen, ketoprofen, ibuprofen, naproxen, or tiaprofenic acid.

23. (withdrawn) The method of claim 20, wherein the drug is a phenylacetic acid derivative.

24. (withdrawn) The method of claim 23, wherein the phenylacetic acid derivative is etodolac, oxaprozin, or zomepirac.

25. (withdrawn) The method of claim 20, wherein the drug is a salicylic acid derivative.

26. (withdrawn) The method of claim 25, wherein the salicylic acid derivative is diflunisil.

27. (withdrawn) The method of claim 20, wherein the drug is an acetic acid derivative.

28. (withdrawn) The method of claim 27, wherein the acetic acid derivative is indomethacin, valproic acid, or zomepirac.

29. (withdrawn) The method of claim 20, wherein the drug is an isobutyric acid derivative.

30. (withdrawn) The method of claim 29, wherein the isobutyric acid derivative is clofibric acid.

31. (withdrawn) The method of claim 1, wherein the drug is a polyhydroxylated estrogen.

32. (withdrawn) The method of claim 31, wherein the polyhydroxylated estrogen is 4-hydroxyestrone, estriol, or 2-hydroxyestriol.

33. (withdrawn) The method of claim 1, wherein the drug is a xenobiotic.

34. (withdrawn) The method of claim 33, wherein the xenobiotic is 2-aminophenol, 4-OH biphenyl, androsterone, 1-naphthol, 4-methylumbelliferone, menthol, 4-nitrophenol, or hyodeoxycholic acid.

35. (withdrawn) The method of claim 1, wherein the drug is an opioid.

36. (withdrawn) The method of claim 35, wherein the opioid is morphinan derivative.

37. (withdrawn) The method of claim 36, wherein the morphinan derivative is normorphine, norcodeine, codeine, naloxone, nalorphine, naltrexone, oxymorphone hydromorphone, dihydromorphone, levorphanol, nalmefene, naltrindole, naltriben, nalbuphine, or morphine.

38. (withdrawn) The method of claim 35, wherein the opioid is an oripavine derivative.

39. (withdrawn) The method of claim 38, wherein the oripavine derivative is norbuprenorphine, buprenorphine, or diprenorphine.

40. (withdrawn) The method of claim 1, wherein the drug is propranolol, temazepam, chloramphenicol, oxazepam, androsterone, epitestosterone, zidovudine, or *all*-trans retinoic acid (ATRA).

41. (original) The method of claim 1, wherein the drug is epirubicin or an epirubicin analog.

42. (withdrawn) The method of claim 1, wherein the drug is a hydroxyl metabolite of an anthracycline.

43. (currently amended) A method of treating a patient with a UGT2B7-glucuronidated drug comprising:

a) determining the activity of UGT2B7 in a patient according to the method of claim 1;

b) administering a dose of the drug ~~to administer~~ to the patient based on activity or expression level of UGT2B7.

44. (withdrawn) The method of claim 43, wherein the drug has an aliphatic carboxylic acid function.

45. (withdrawn) The method of claim 44, wherein the drug is a propionic acid derivative, a phenylacetic acid derivative, a salicylic acid derivative, a acetic acid derivative, or an isobutyric acid derivative .

46. (withdrawn) The method of claim 45, wherein the drug is a propionic acid derivative.

47. (withdrawn) The method of claim 46, wherein the proprionic acid derivative is benoxaprofen, fenoprofen, ketoprofen, ibuprofen, naproxen, or tiaprofenic acid.

48. (withdrawn) The method of claim 45, wherein the drug is a phenylacetic acid derivative.

49. (withdrawn) The method of claim 48, wherein the phenylacetic acid derivative is etodolac, oxaprozin, or zomepirac.

50. (withdrawn) The method of claim 45, wherein the drug is a salicylic acid derivative.

51. (withdrawn) The method of claim 50, wherein the salicylic acid derivative is diflunisil.

52. (withdrawn) The method of claim 45, wherein the drug is an acetic acid derivative.

53. (withdrawn) The method of claim 52, wherein the acetic acid derivative is indomethacin, valproic acid, or zomepirac.

54. (withdrawn) The method of claim 45, wherein the drug is an isobutyric acid derivative.

55. (withdrawn) The method of claim 54, wherein the isobutyric acid derivative is clofibric acid.

56. (withdrawn) The method of claim 43, wherein the drug is a polyhydroxylated estrogen.

57. (withdrawn) The method of claim 56, wherein the polyhydroxylated estrogen is 4-hydroxyestrone, estriol, or 2-hydroxyestriol.

58. (withdrawn) The method of claim 43, wherein the drug is a xenobiotic.

59. (withdrawn) The method of claim 58, wherein the xenobiotic is 2-aminophenol, 4-OH biphenyl, androsterone, 1-naphthol, 4-methylumbelliferone, menthol, 4-nitrophenol, or hyodeoxycholic acid.

60. (withdrawn) The method of claim 43, wherein the drug is an opioid.

61. (withdrawn) The method of claim 60, wherein the opioid is morphinan derivative.

62. (withdrawn) The method of claim 61, wherein the morphinan derivative is normorphine, norcodeine, codeine, naloxone, nalorphine, naltrexone, oxymorphone hydromorphone, dihydromorphone, levorphanol, nalmefene, naltrindole, naltriben, nalbuphine, or morphine.

63. (withdrawn) The method of claim 60, wherein the opioid is an oripavine derivative.

64. (withdrawn) The method of claim 63, wherein the oripavine derivative is norbuprenorphine, buprenorphine, or diprenorphine.

65. (withdrawn) The method of claim 43, wherein the drug is propranolol, temazepam, chloramphenicol, oxazepam, androsterone, epitestosterone, zidovudine, or *all*-trans retinoic acid (ATRA).

66. (original) The method of claim 43, wherein the drug is epirubicin or an epirubicin analog.

67. (withdrawn) The method of claim 43, wherein the drug is a hydroxyl metabolite of an anthracycline.

68. (currently amended) A method for evaluating the risk of toxicity of a UGT2B7-glucuronidated drug in a patient comprising:

a) identifying a patient at risk for toxicity from a UGT2B7-glucuronidated drug;

b) obtaining a sample from the patient;

c) determining the level of UGT2B7 activity or expression by determining the nucleotide sequence at position -161 in one *UGT2B7* gene of the patient.

69. (original) The method of claim 68, wherein the nucleotide sequence at position -161 in the other *UGT2B7* gene of the patient is determined.

70. (original) The method of claim 68, wherein the patient is a cancer patient.

71. (original) The method of claim 70, wherein the drug is epirubicin or an epirubicin analog.

72. (withdrawn) The method of claim 68, wherein the drug has an aliphatic carboxylic acid function.

73. (withdrawn) The method of claim 72, wherein the drug is a propionic acid derivative, a phenylacetic acid derivative, a salicylic acid derivative, a acetic acid derivative, or an isobutyric acid derivative .

74. (withdrawn) The method of claim 73, wherein the drug is a propionic acid derivative.

75. (withdrawn) The method of claim 74, wherein the proprionic acid derivative is benoxaprofen, fenoprofen, ketoprofen, ibuprofen, naproxen, or tiaprofenic acid.

76. (withdrawn) The method of claim 73, wherein the drug is a phenylacetic acid derivative.

77. (withdrawn) The method of claim 76, wherein the phenylacetic acid derivative is etodolac, oxaprozin, or zomepirac.

78. (withdrawn) The method of claim 73, wherein the drug is a salicylic acid derivative.

79. (withdrawn) The method of claim 78, wherein the salicylic acid derivative is diflunisil.

80. (withdrawn) The method of claim 73, wherein the drug is an acetic acid derivative.

81. (withdrawn) The method of claim 80, wherein the acetic acid derivative is indomethacin, valproic acid, or zomepirac.

82. (withdrawn) The method of claim 73, wherein the drug is an isobutyric acid derivative.

83. (withdrawn) The method of claim 82, wherein the isobutyric acid derivative is clofibric acid.

84. (withdrawn) The method of claim 68, wherein the drug is a polyhydroxylated estrogen.

85. (withdrawn) The method of claim 84, wherein the polyhydroxylated estrogen is 4-hydroxyestrone, estriol, or 2-hydroxyestriol.

86. (withdrawn) The method of claim 68, wherein the drug is a xenobiotic.

87. (withdrawn) The method of claim 86, wherein the xenobiotic is 2-aminophenol, 4-OH biphenyl, androsterone, 1-naphthol, 4-methylumbelliferone, menthol, 4-nitrophenol, or hyodeoxycholic acid.

88. (withdrawn) The method of claim 68, wherein the drug is an opioid.

89. (withdrawn) The method of claim 88, wherein the opioid is morphinan derivative.

90. (withdrawn) The method of claim 89, wherein the morphinan derivative is normorphine, norcodeine, morphine, codeine, naloxone, nalorphine, naltrexone, oxymorphone hydromorphone, dihydromorphone, levorphanol, nalmefene, naltrindole, naltriben, nalbuphine, or morphine.

91. (withdrawn) The method of claim 88, wherein the opioid is an oripavine derivative.

92. (withdrawn) The method of claim 91, wherein the oripavine derivative is norbuprenorphine, buprenorphine, or diprenorphine.

93. (withdrawn) The method of claim 68, wherein the drug is propranolol, temazepam, chloramphenicol, oxazepam, androsterone, epitestosterone, zidovudine, or *all*-trans retinoic acid (ATRA).

94. (original) A method for screening an individual for glucuronidation activity comprising

a) identifying a patient in need of screening for glucuronidation activity; and,

b) identifying the nucleotide sequence of a polymorphism that correlates with glucuronidation activity in the individual.

95. (original) The method of claim 94, wherein the polymorphism is position -161, +801, or +802 in the *UGT2B7* gene.

96. (original) The method of claim 94, futher comprising obtaining a sample from the individual, wherein the sample comprises nucleic acid from the individual.

97. (original) The method of claim 96, wherein the polymorphism is identified by amplifying the nucleic acid by PCR.

98. (original) The method of claim 96, wherein the polymorphism is identified by sequencing the nucleic acid.

99. (currently amended) A method for prescribing a dose of a UGT2B7-glucuronidated drug to a patient comprising:

a) obtaining a sample from a patient in need of the UGT2B7-glucuronidated drug; and

b) determining the level of UGT2B7 activity or expression by determining the nucleotide sequence at position -161 in one *UGT2B7* gene of the patient.

100. (currently amended) A method for predicting the degree of an epirubicin-induced toxicity in a cancer patient comprising

a) identifying a cancer patient at risk for epirubicin-induced toxicity;

b) determining the level of UGT2B7 activity or expression by determining the nucleotide sequence at position -161 in one *UGT2B7* gene of the cancer patient.

101. (withdrawn) A kit for evaluating the level of UGT2B7 activity in a subject comprising, in a suitable container means:

a) a first nucleic acid comprising 15 contiguous bases complementary or identical to the *UGT2B7* gene, wherein the first nucleic acid allows the identification of the sequence of a first polymorphism in the *UGT2B7* gene.

102. (withdrawn) The kit of claim 101, wherein the first polymorphism is at position -161, +801, or +802 of the *UGT2B7* gene.

103. (withdrawn) The kit of claim 102, wherein the first polymorphism is at position -161.

104. (withdrawn) The kit of claim 102, further comprising, in a suitable container means,

b) a second nucleic acid comprising 15 contiguous bases complementary or identical to the *UGT2B7* gene, wherein the first nucleic acid allows the identification of the sequence of a second polymorphism in the *UGT2B7* gene, in which the second polymorphism is a different than the first polymorphism.

105. (withdrawn) The kit of claim 104, wherein the second polymorphism is at position -161, +801, or +802 of the *UGT2B7* gene.

106. (withdrawn) The kit of claim 105, further comprising, in a suitable container means,

b) a third nucleic acid comprising 15 contiguous bases complementary or identical to the *UGT2B7* gene, wherein the first nucleic acid allows the identification of the sequence of a third polymorphism in the *UGT2B7* gene, in which the third polymorphism is a different than the first and second polymorphisms.

107. (withdrawn) The kit of claim 106, wherein the third polymorphism is at position -161, +801, or +802 of the *UGT2B7* gene.

108. (withdrawn) The kit of claim 107, wherein the first, second, and third nucleic acids are attached to a nonreactive array plate.